UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,311	11/26/2001	William A. White III	SAA-61	9418

23569	7590	08/09/2005

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EXAMINER
BENGZON, GREG C

ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/004,311	WHITE ET AL.
	Examiner	**Art Unit**	
	Greg Bengzon	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _23 June 2005_.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-16_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-16_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. Claims 1-16 are pending. Applicants

amended claims 1-4, 7, 10, 13, 15 and 16.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-11, 13 and 16 are rejected under 35 U.S.C. 102(b) as being

anticipated by Thomsen et al. (US Patent 5404460), hereinafter referred to as

Thomsen.

With respect to Claim 1, Thomsen discloses a method of assigning a network

identifier to a client node, the client node having a memory and being operably

connected to a server wherein the server assigns the network identifier to the client

node, (Figure 1, Column 2 Lines 25-65) the method comprising the steps of: providing

a default identifier, the default identifier being assigned to the client node (Column 6

Lines 1-10); determining a location of the client node, the location being identified with

respect to the server (Column 6 Lines 1-50); and, assigning the network identifier <u>by</u>

<u>the server</u> (Column 7 Lines 30-40) to the client node in response to the determined

location of the client node (Column 6 Lines 1-50).

With respect to Claim 2, Thomsen discloses the method of claim 1 wherein the determining the location of the client node comprises the steps of: receiving a request for the network identifier from the client node (Column 5 Lines 55-65); transmitting a toggle signal from the server, the toggle signal having an amount of state transitions; storing the amount of state transitions in the memory of the client node (Column 6 Lines 1-50); and, identifying the client node having the default identifier and the amount of state transitions.

With respect to Claim 3, Thomsen discloses the method of claim 2 wherein identifying the client node having the default identifier and the amount of state transitions comprises the steps of: transmitting a request by the server to receive the amount of state transitions stored in the memory of the client node(Column 7 Lines 25-30); and, comparing the amount of state transitions stored in the memory of the client node with the toggle signal wherein the network identifier is transmitted to the client node in response to the comparison. (Column 7 Lines 20-45)

With respect to Claim 4, Thomsen discloses a method of assigning a network identifier to each of a plurality of client nodes operably connected to a network, each client node being operably connected to a network server wherein the network server assigns a network identifier to each client node (Figure 1 Column 2 Lines 25-65), the method comprising the steps of: providing a default network identifier, each of the

plurality of client nodes being assigned the default network identifier (Column 6 Lines 1-10); requesting a network identifier from the network server, the request being made by the client node having the default identifier (Column 5 Lines 55-65); determining the client node having the default identifier and being nearest to the server (Column 6 Lines 1-50); and, assigning the network identifier by the network server to the identified client node, wherein additional, unique , network identifiers are subsequently assigned to each remaining client node having a default identifier and being nearest to the server. (Column 6 Lines 1-50).

With respect to Claim 5, Thomsen discloses the method of claim 4 further comprising: inserting an additional client node into the network; and, identifying the additional client node for assigning the permanent network identifier. (Column 7 Lines 20-65, Column 8 Lines 1-25)

With respect to Claims 7-9, the Applicant describes an sequence order for events that occur in the method described in Claims 1-5. Claims 7-9 are rejected on the same basis as Claims 1-5.

With respect to Claims 10-11 and Claim 13, the Applicant discloses methods with the same limitations as described in Claims 1-5. Claims 10-11 are rejected on the same basis as Claims 1-5.

With respect to Claim 13, Thomsen discloses a network comprising a server

node and one or more operably connected client nodes wherein a permanent identifier

is assigned to each client node in response to a location of each client node with

respect to the server node, (Figure 1, Column 2 Lines 25-65) the network comprising:

the server node having an address input and an address output; each of the one or

more operably connected client nodes having an address input and an address output,

the address input and the address output being operably connected to a microprocessor

in the network client node; a communication bus being operably connected to the server

node and each of the one or more client nodes; an address bus being operably

connected the server node and each of the one or more client nodes, the address bus

being connected between the output address of the server node and the input address

of the nearest client node, the output address of the nearest client node being

connected to the input address of the next nearest client node, wherein each

subsequent operably attached client node is similarly connected to the network; and, a

network identifier being assigned to each client node, the network identifier of each

client node being assigned a unique value in response to the location of each respective

client node to the server node. (Column 6 Lines 1-50)

With respect to Claim 16, Thomsen discloses the communication network of

claim 13   wherein the client node is an output module. (Abstract, Column 8 Lines 20-

25)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6,12, 14 and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Thomsen et al. (US Patent 5404460), hereinafter referred to as

Thomsen, in view of Krivoshein et al (US Patent 5980078), hereinafter referred to as

Krivoshein.

With respect to Claim 6 and 12, Thomsen substantially discloses the method of

claim 5 and 11.

With respect to Claim 14 and 15, Thomsen substantially discloses the

communication network of claim 13.

However Thomsen does not disclose the methods of Claims 5 and 11 further

comprising: optimizing the assigning of a network identifier, the optimizing comprising

the steps of: monitoring a level of network interaction of each client node ; selecting a

client node having a lowest level of network interaction; and, assigning the network

identifier in response to the selected client node. Thomsen does not disclose wherein

at least one of the client nodes is a placeholder node for reserving a network identifier

for the position occupied by the placeholder node. With respect to Claim 15, Thomsen

does not disclose the communication network of claim 13 wherein the network is

CANOpen.

Krivoshein discloses of a digital control system for a fieldbus network that is able

to sense new nodes on the network, monitor the various transition states of each node,

track the status of each node, and compile statistics on each node. Krivoshein

discloses of monitoring a level of network interaction of each client node (Column 6

Lines 60-65, Column 7 Lines 1-65, Column 8 Lines 1-65, Column 22 Lines 10-35);

selecting a client node having a lowest level of network interaction; and, assigning the

network identifier in response to the selected client node. (Figures 2-7, Column 10 Lines

45-65, Column 11 Lines 1-10). Krivoshein discloses wherein at least one of the client

nodes is a placeholder node for reserving a network identifier for the position occupied

by the placeholder node. (Column 8 Lines 50-65). Krivoshein discloses of a serial bus

network being implemented using CAN protocols. (Column 2 Lines 50-60)

Thomsen and Krivoshein are analogous art because they are presenting

concepts and practices regarding device control systems using a serial bus network

architecture. It is respectfully suggested that at the time of the invention it would have

been obvious to a person of ordinary skill in the art to combine the teachings of

Krivoshein regarding monitoring and automatic address assignment for new devices

into the method and network described by Thomsen . The suggested motivation for

doing so would be, as Krivoshein suggests, to allow for individual field devices to be

configured without local independent programming, and also allow for configuration

from a remote location. Krivoshein also cites the using such standard control protocols

such as the CAN protocol can reduce the time and effort of developing a control system.

(Column 2 Lines 50-60, Column 3 Lines 5-20)

Therefore it would have been obvious to combine the teachings of Krivoshein

into the network and methods of Thomsen in order to obtain the invention described in

Claims 6,12, 14 and 15.

Response to Arguments

Applicant's arguments filed 06/23/2005 have been fully considered but they are

not persuasive.

The Examiner objections to Claim 16 have been withdrawn.

The rejection for Claim 15 based on USC 112 1st Paragraph is withdrawn.

The Applicant presents the following argument(s) [*in italics*]:

However, unlike the method of claim 1, each I-O device of Thomsen et al., the I-0

devices configure their own addresses…. Accordingly, the server of Thomsen et al., is

not assigning network identifiers to the I-0 devices.

The Examiner respectfully disagrees with the Applicant. In Column 7 Lines 30-40 Thomsen disclosed sending a packet to the EXCA controller (the Input-Output device), said packet indicating the EXCA controller ID which the controller is assigned. In Column 2 Lines 45-50 Thomsen states that this unique address is then used to identify the relevant device when communicating with the System Controller. Thus Thomsen disclosed that the System Controller may assign the network identifier to the controller.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

US 5675830 Satula, Keith O. - method and system is provided for assigning addresses to input/output (I/O) devices in a control network, and for verifying addresses assigned to the I/O devices (Column 6 Lines 25-65). Each I/O cluster unit provides means for manually requesting address assignments.

US 6721799 B1 Slivkoff, William J. – disclosed that the CANopen protocol specifies that the state of a control bit, termed the "toggle bit", contained in the identifier field of the incoming CANopen Frame, must be reflected in the acknowledgment Frame.

US 6216172 B1 Kolblin; Robert et al. - method of automatically allocating addresses in a controller area network (CAN) including a plurality of bus subscribers, one of which serves as the controlling station for initiating address allocation, whereby

each bus subscriber is assigned a unique serial number memorized in a non-volatile
memory of the bus subscriber and whereby each bus subscriber has a writeable non-
volatile memory.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Greg Bengzon whose telephone number is (571) 272-
3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, William Cuchlinski can be reached on (571)272-3925. The fax phone
number for the organization where this application or proceeding is assigned is 703-
872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/gcb

MARC D. THOMPSON

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PRIMARY EXAMINER